

General Purpose Farms Program of Work:

Current Status:

General Purpose Farms:

Configuration:

- Head node/ FBSNG batch manager, fnsfo—IRIX/SGI.
- Worker nodes for production use in FBSNG, 102 currently
- OSG gatekeeper, and condor head, fngp-osg
- Condor pool of nodes accessible to grid, fnpc201-214
- Home areas for all users, grid and non-grid, exported from fnsfo
- OSG /app, /data, /scratch areas exported from fngp-osg
- All userid's and NFS mounts for FBSNG, OSG, Condor available everywhere.

One gatekeeper (fngp-osg) plus 14 worker nodes (fnpc201-214) have been in OSG Integration Test bed since it started in Mid-Feb '05. Condor is the batch system. fermigrid1 can also submit into this condor pool.

fngp-osg is configured to use GUMS and PRIMA for authentication. Currently pointed at test GUMS server cmsrv08, maintained by J. Weigand/CMS.

All OSG VO's are enabled. There are no outstanding validation problems from any VO at the moment.

Fermigrid Gateway:

Fermigrid1: Gatekeeper--can successfully authenticate using voms-proxy-init with the Fermilab VO on fermigrid3 using VOMS/GUMS/PRIMA chain, and OSG site verify script passes. GRIS, globus, condor, PRIMA, MIS-CI all configured.

Fermigrid2: (VOMS server)

All GP Farms user VO's created on fermigrid2 VOMS server
VOMS and VOMRS set up and working for all these VO's

List of VO's: accelerator, auger, des, dzero, fermilab, hypercp, ktev, miniboone, minos, numi, patriot, ppd_astro, ppd_theory, samgrid.

Above VO's were registered with igoc@ivdgl.org Registration at other locations and websites appears to be necessary too. Each VO will register with the OSG only as it is ready to do work. DES VO will be the first example.

VO's for gadu, sdss, cms, currently on cms machines, have been created but not registered or populated yet. gadu and sdss contacts have instructions on how to migrate VO's.

Fermigrid3: (GUMS server)

Has been installed and mostly configured, some mapping present for all OSG and fermigrid VO's. Small problem with host certificates of type CN=host/fermigrid3.fnal.gov, fix coming, but it is OK for testing.

Program of work for Near Term (next two weeks)

GP Farms:

Continue testing and debugging of SDSS job chain on fngp-osg and workers.
(0.1 FTE-Month CSS (timm), 0.25 FTE-month EAG (neha))

Continue testing of GlideCAF with CDF personnel.
(0.1 FTE-Month CSS (timm), 0.1 FTE-month CDF collaborators (sarkar, sfiligoi)).

Testing of condor priorities and group quotas to keep grid jobs from overrunning local users. This testing is completed. Group quotas in Condor, as used in Condor-CAF, allow us to give maximum quota of jobs to any group, local or grid.

Test the chain of submitting a job and reading and writing files to and from SRM/dCache.
(0.5 FTE-Month CSS (timm), 0.25 FTE-Month CCF (upper storage))

Add full complement of Fermi userid's (i.e., the extra pool users required by Fermi VO's such as USCMS, DES. Rest of GP farm users above will get one userid per VO.. Find better way to automate said process (0.1 FTE-month CSS (mgreaney)).

Fermigrid gateway:

Fix ACS console server (CSS/vanconant).

Fermigrid1/gatekeeper:

Discussion with Condor personnel on best way to forward jobs from gateway to multiple condor pools such as USCMS, GPFarms. (Will start, but not complete, in two weeks).
(CSS/timm)

Add userid's to password file on gateway machines (CSS/timm), making Fermi uid/gid as necessary.

Fermigrid2/VOMS

Populate the Fermilab VO (yocum)

Aid gadu, uscms, sdss in migrating to production server (yocum)

Fermigrid3/GUMS

Test authentication of various VO's with fermigrid3 GUMS server, be prepared to shift GP Farms to use it when it is ready.

Set up the production GUMS mapping. (CCF/yocum)

(Note, it was agreed in principle at the stakeholders meeting that there would be a unified GUMS mapping for the Fermilab site, that GP Farms would support the USCMS pool of userid's, and that USCMS would support the 10 GP Farms VO userid's.)

Policy Decisions to be made:

Need meeting with upper storage to understand the added load on stken and SRM-dcache, and who is going to pay for it.(0.25 FTE-month, long meeting) Note—this is concerned only with current Fermilab users who are current users of Enstore, who would now make the transition to access data via x509 doors to dCache. Nothing is implied about putting dCache open to all grid users.

Scope of helpdesk support for VO registration needs to be understood.

SAZ exemption that has been submitted needs to be approved. But even if it is not, all current GP Farms users are also Fermilab Users and will have access to KCA-based certificates

Longer Term Issues:

GP Farms

Get Documentation written "How to submit a job via grid to GP Farms".
(1 FTE-month)

Plan User Workshop to educate current users of GP Farms how to use Condor and Condor-G to submit jobs to the new system. (0.5 FTE-month)

Note: We plan to deploy on OSG with just the current 14 nodes initially accessible to the grid. The 102 nodes still running FBSNG will not be accessible to the grid. New 40 nodes to come this summer will go into the Condor pool and be on OSG as will any new purchases. Expect transition of remaining GP Farms to full Condor by the end of calendar year '05.

Understand Condor batch system authentication with Kerberos and x509. Condor has x509 and Kerberos authentication available but we do not know whether x509 credentials can be passed through the Globus GRAM interface to the batch system. CMS has been operating without this so it is not necessary to solve this before deployment. (2 FTE-month)

Fermigrid Gateway:

Fermigrid will go into the OSG representing two major clusters, USCMS and GP Farms. Both clusters will be able to take submissions directly to their own gatekeepers for so-called "Fermi VO's" but non-Fermi OSG VO's (grase, gadu, fmri, star, osg, ivdgl, lsc01) will have to go through the Fermigrid gatekeeper. Job forwarding may not be resolved by the time of OSG deployment but we will try to have it working.